

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
First Coast Guard District

One South Street
Battery Park Bldg
New York, NY 10004-1466
Staff Symbol: dpb
Phone: 212 668-7165
Fax: 212 668-7967
Email:

16591/3.9/H/
HOUSATONIC RIVER/
CT

MAY 11 2009

Mr. Thomas A. Harley, P. E.
Manager of Consultant Design
Bureau of Engineering and Highway Operations
Connecticut Department of Transportations
2800 Berlin Turnpike, P. O. Box 317546
Newington, CT 06131-7546

Dear Mr. Harley:

Enclosed is Bridge Permit 3-09-1 dated 4 May 2009, approving the location and construction of the (I-95) Moses Wheeler Bridge across the Housatonic River, mile 3.9, between the Town of Stratford and the City of Milford, Connecticut.

Permanent navigational lights shall be installed in accordance with Part 118 of Title 33, Code of Federal Regulations. Plans for the navigational lights should be submitted to this office for approval at an early date. Drawings showing location and arc of visibility of the lights should be shown in elevation and plan view on 8 1/2" x 11" mylar sheets. Approved prints will be returned to you. Permanent navigational lighting shall be operational upon completion of bridge construction. The Coast Guard Bridge Lighting Manual may be obtained at the following website: <http://www.uscg.mil/hq/cg5/cg5411/> (Click on Bridge Lighting Manual).

During the periods of construction, each pier, abutment or other obstruction may be required to be lighted for the safety of navigation. This office shall be contacted during construction plan development for a determination of temporary lighting needs.

This office shall be notified 30 days prior to the actual commencement and completion of the bridge work so that appropriate announcements may be prepared for our Local Notice to Mariners publication.

Anticipated closures or obstruction of the drawbridge (due to work equipment) should be coordinated with this office as early in the construction planning process as possible. Comments regarding anticipated closures should be requested of this office prior to contract bid advertisement (if practicable) so that bids will reflect viable construction plans.

Please note conditions: four (4) in water construction seasonal restrictions; five (5) fender system construction and six (6) removal depths for various parts of the existing bridge.

The proposed construction work is approved subject to these provisions:

- a. Preferably 30 days, but at least 14 days prior to the commencement of any work in the

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COPIES SENT	
COPIES TO BE	

waterway, two copies of the contractor's plan, schedule, and sequence of operations, approved by your office, shall be submitted to this office for approval. In addition, a sketch of the project area shall be submitted showing the following: 1) the waterway, 2) the bridge, 3) the location of any barges or restrictions that will be placed in the water, 4) detailed description of any scaffolding or netting to be used, and 5) the placement, type, and dimensions of cofferdams, if used, with the method of screening silt from dewatering operations. The schedule should also include the daily hours of operation and should indicate whether waterborne equipment will remain in the waterway at night. The contractor will be required to comply with all provisions of the Inland Navigation Rules, copies of which are available from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250. One copy of the plan and schedule of operations, approved by this office, will be returned to you with our approval stamp and comments as appropriate.

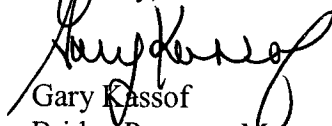
- b. Black and white, 8 ½" x 11", glossy photographs of the completed bridge, taken from the mariner's perspective both up and downstream of the bridge, are requested for record purposes.
- c. The as-built clearances shall be certified in writing to this office by a responsible official of the permittee, a licensed surveyor or a registered professional engineer upon completing bridge work.
- d. It is the permittee's responsibility to ensure that channel depths are not affected by this work. Any material, machinery or equipment lost, dumped, thrown into, or otherwise entering the waterway must be removed immediately. If immediate removal is impractical and the object entering the waterway could possibly obstruct or hazard navigation, the object must be marked immediately to protect navigation and the Coast Guard shall be notified as soon as possible. Such notification shall give the location and type of obstruction and the navigational markings installed. Upon project completion, the permittee or registered professional engineer shall certify that the waterway depths have not been impaired and that the waterway is clear of materials or debris resulting from bridge construction.
- e. Spillage of oil and hazardous substances is specifically prohibited by Section 311 of the Clean Water Act, as amended. Measures including properly maintaining construction equipment, designating fuel/hazardous substances handling areas to allow spills to be contained before reaching the waterway, instructing personnel not to dispose of oil/hazardous substances into drains or into the waterway directly, and other necessary procedures should be implemented to prevent spillage. If oil/hazardous substances are spilled into the waterway in spite of such planning, the U.S. Coast Guard is to be notified immediately at 800-424-8802. An adequate supply of absorbent material should be readily accessible to soak up any possible spillage pending Coast Guard arrival. The use of chemical dispersing agents and emulsifiers is not authorized without prior, specific, federal approval.

- f. Should archaeological resources be encountered during construction operations, the work shall cease and this office and the State Historic Preservation Office shall be consulted for possible recovery of those resources.

Should the permittee fail to ensure that the contractor complies with these requirements and should the Federal Government be required to take action for the protection of navigation, the Government reserves the right to recover the cost for such work from the permittee, the contractor, or both, as applicable.

The Government assumes no responsibility for any damages sustained or caused by the contractor's equipment or barges being anchored or moored at the aforementioned location. Also, this approval shall not act as a waiver of liability for any damage that may result from the applicant's operation.

Sincerely,



Gary Kassof
Bridge Program Manager
First Coast Guard District
By direction of the District Commander

Encl: 1) Copy of Bridge Permit 3-09-1 dated 4 May 2009 w/approved plans

Copy: COE New England District w/encl
Sector Long Island Sound w/encl
NOS, Rockville, MD w/encl
NMFS, Gloucester, MA w/ encl
NMFS, Milford, CT w/encl
FHWA Connecticut Division w/encl
CONNDEP w/ encl



BRIDGE PERMIT

(3-09-1)

MAY 04 2009

WHEREAS by Title V of an act of Congress approved August 2, 1946, entitled "General Bridge Act of 1946," as amended (33 U.S.C. 525-533), the consent of Congress was granted for the construction, maintenance and operation of bridges and approaches thereto over the navigable waters of the United States;

AND WHEREAS the Secretary of Homeland Security has delegated the authority of Section 502(b) of that act to the Commandant, U. S. Coast Guard by Department of Homeland Security Delegation Number: 0170.1;

AND WHEREAS before construction is commenced, the Commandant must approve the location and plans of any such bridge and may impose any specific conditions relating to the construction, maintenance and operation of the structure deemed necessary in the interest of public navigation, such conditions to have the force of law;

AND WHEREAS the Commandant of the Coast Guard has further delegated to the District Commanders, by Section 1.01-60(b) of Title 33, Code of Federal Regulations, authority to issue permits for the construction, reconstruction, or alteration of bridges across navigable waters of the United States;

AND WHEREAS the - STATE OF CONNECTICUT - has submitted for approval the location and plans of a bridge to be constructed across the Housatonic River between Stratford and Milford, Connecticut;

NOW THEREFORE, This is to certify that the location and plan sheets 1-6, 8, 9 (of 9) dated 17 August 2006, and sheet 7 dated 3 October 2006, are hereby approved by the Commander, First Coast Guard District, subject to the following conditions:

1. No deviation from the approved plans may be made either before or after completion of the structure unless the modification of said plans has previously been submitted to and received the approval of the District Commander.

Bridge across the Housatonic River
between Stratford and Milford, Connecticut

MAY 04 2009
(3-09-1)

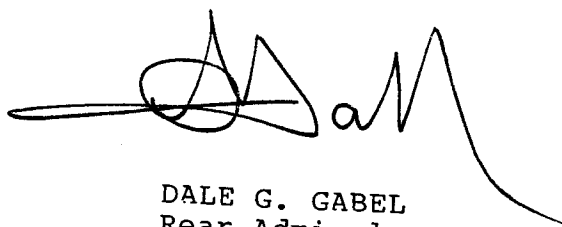
2. The construction of falsework, cofferdams or other obstructions, if required, shall be in accordance with plans submitted to and approved by the District Commander, prior to construction of the bridge. All work shall be so conducted that the free navigation of the waterway is not unreasonably interfered with and the present navigable depths are not impaired. Timely notice of any and all events that may affect navigation shall be given to the District Commander during construction of the bridge. Methods shall be employed to ensure that there will be no increases of sedimentation and turbidity in the waterway during construction. Seeding, sodding or other methods shall be employed for soil stabilization during construction. The channel or channels through the structure shall be promptly cleared of all obstructions placed therein or caused by the construction of the bridge to the satisfaction of the District Commander, when in the judgment of the District Commander the construction work has reached a point where such action should be taken, but in no case later than 90 days after the bridge has been opened to traffic.
3. Issuance of this permit does not relieve the permittee of the obligation or responsibility for compliance with the provisions of any other law or regulation as may be under the jurisdiction of the U. S. Department of Commerce, National Marine Fisheries Service, or any other federal, state or local authority having cognizance of any aspect of the location, construction or maintenance of said bridge.
4. In-water construction activities associated with this project shall cease in their entirety from February 1 through June 30 of each year that work on the project continues. This moratorium is intended to preclude disruption of fish migration and to keep fishery resource harms and losses to a minimum.
5. The pier protection fender system shall be constructed and maintained as shown on the approved plan sheets 6 (of 9) dated 7 August 2006 and sheet 7 dated 3 October 2006 for the safety of navigation.

MAY 04 2009

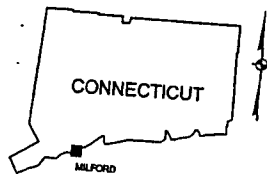
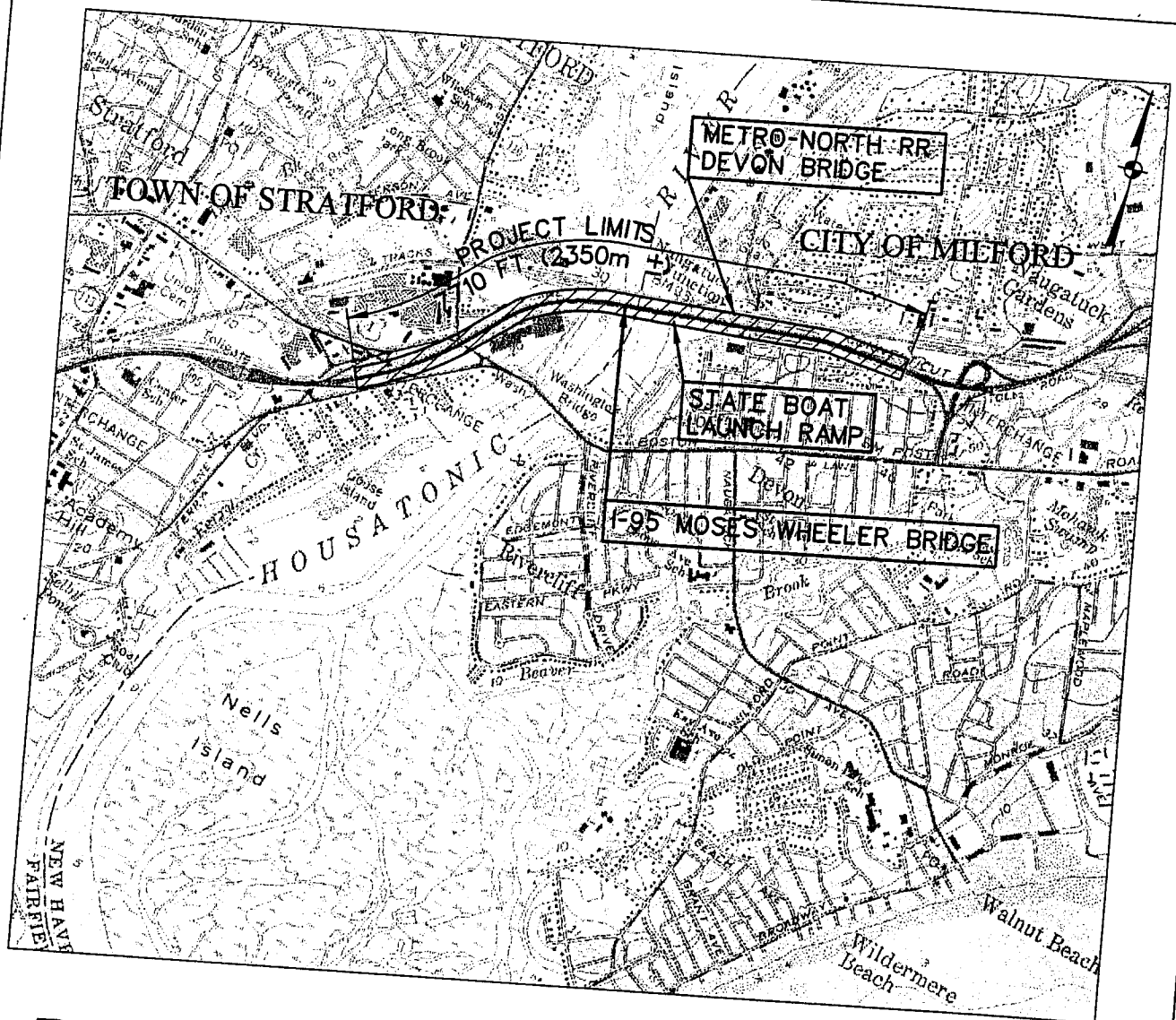
BRIDGE PERMIT

Bridge across the Housatonic River
between Stratford and Milford, Connecticut (3-09-1)

6. All parts of the existing to-be-replaced Moses Wheeler Bridge across the Housatonic River, mile 3.9, not utilized in the new bridge, except piers 1W, 2W, 3W, 4W 1E, 2E, 3E, and 4E, shall be removed to a minimum of one foot below the natural ground line or bottom of the waterway. Existing bridge piers 1W and 1E shall be removed down to elevation 24 feet below Mean Low Water or 5 feet below the channel bottom, whichever is deeper. Existing bridge piers 2E, 3E, 4E, 2W, 3W, and 4W shall be removed to a minimum of 3 feet below the natural bottom of the waterway. The waterway shall be cleared to the satisfaction of the District Commander when in the judgment of the District Commander the construction of the new bridge, mile 3.9, has reached a point where such action should be taken.
7. When the proposed bridge is no longer used for transportation purposes, it shall be removed in its entirety or to an elevation deemed appropriate by the District Commander and the waterway cleared to the satisfaction of the District Commander. Such removal and clearance shall be completed by and at the expense of the owner of the bridge upon due notice from the District Commander.
8. The approval hereby granted shall cease and be null and void unless construction of the bridge is commenced within three years and completed within five years after the date of this permit.

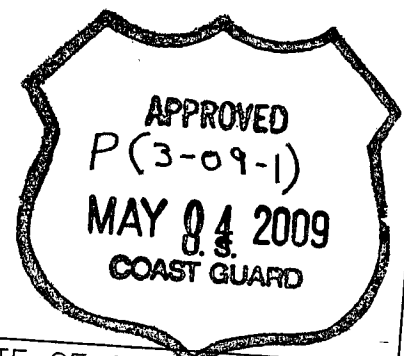


DALE G. GABEL
Rear Admiral, U.S. Coast Guard
Commander, First Coast Guard District



2000 1000 0 2000
SCALE IN FEET

SOURCE: USGS QUADRANGLE - MILFORD, CT PHOTO REVISED 1984
AND BRIDGEPORT, CT PHOTO REVISED IN 1984



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

STRATFORD/MILFORD

REPLACEMENT OF I-95 BRIDGE
OVER THE HOUSATONIC RIVER
MILE 3.9

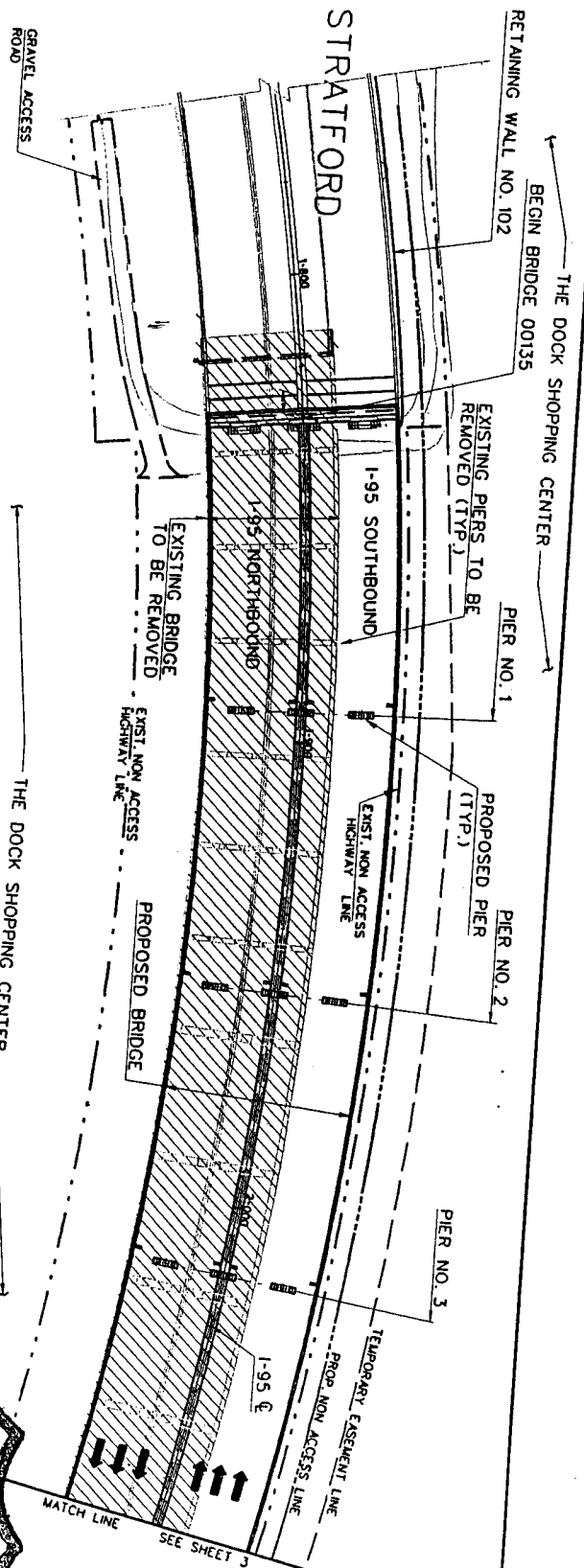
DATE: 8/17/06

VICINITY MAP

SHEET
1 OF 9

NOTES:

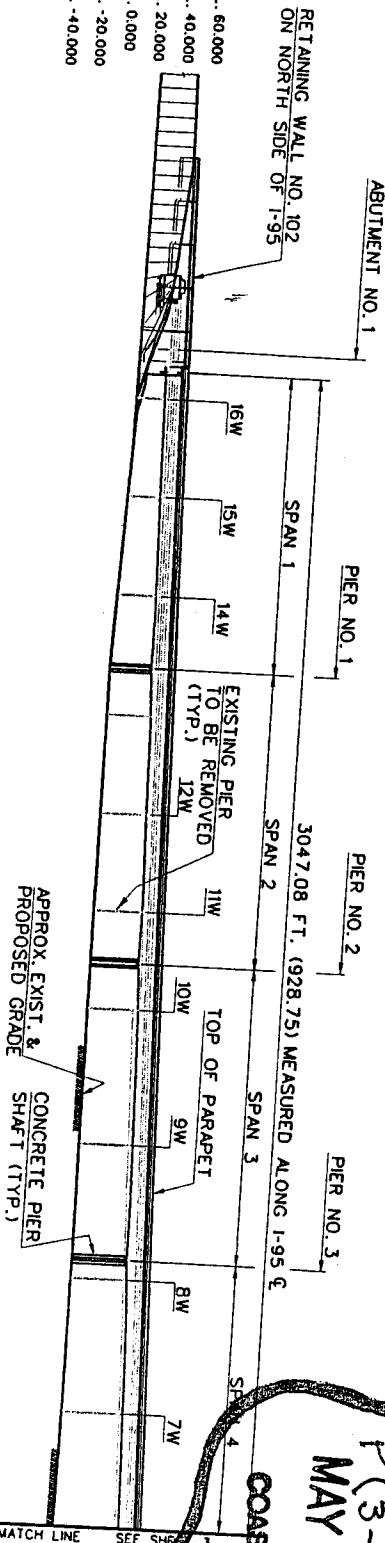
1. THE SURVEY VERTICAL CONTROL FOR THIS PROJECT IS REFERENCED TO THE NAVD 88 VERTICAL DATUM, IN SI UNITS (METERS).
2. THE TIDAL AND FLOOD ELEVATIONS, WHERE INDICATED ON THE FOLLOWING SHEETS, IS PROVIDED IN BOTH U.S. CUSTOMARY UNITS (FEET) AND SI UNITS (METERS). THE ELEVATIONS IN METERS REFER TO THE NAVD 88 VERTICAL DATUM. THE ELEVATION DATA IN FEET ARE REFERENCED TO BOTH THE NAVD 88 AND NGVD 29 VERTICAL DATUMS.
3. THE NEAREST SURVEY BENCH MARK TO THE RIVER DEVELOPED FOR THIS PROJECT IS B.M. 8-B LOCATED ON A DISK FOR A CHD MONUMENT UNDER THE MOSES WHEELER BRIDGE ON THE EAST SIDE OF THE RIVER (SEE FIGURE 4 OF 9 FOR LOCATION).



PLAN
SCALE: 1:1500

ELEV. FEET (NAVD 88)

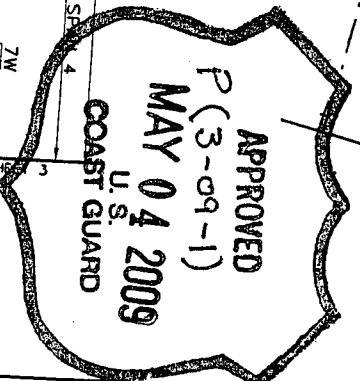
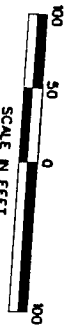
EL. 60.000
EL. 40.000
EL. 20.000
EL. 0.000
EL. -20.000
EL. -40.000



ELEVATION - SOUTH FASCIA
SCALE: 1:1500

LEGEND
LIMITS OF EXISTING MOSES WHEELER BRIDGE

- NOTES:**
1. EXISTING PIERS 16W, 15W, 14W, 13W, 12W, 11W, 10W, 9W, 8W AND 7W SHALL BE REMOVED TO AT LEAST 1 FOOT BELOW GROUND LINE.
 2. ALL DIMENSIONS IN PARENTHESES ON THIS PLAN ARE IN METERS, UNLESS NOTED OTHERWISE.



STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	
STRATFORD/MILFORD	
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER MILE 3.9	
DATE: 8/17/06	GENERAL PLAN BRIDGE NO. 00135
SHEET 2 OF 9	

METRO-NORTH RAILROAD NEW HAVEN LINE

PIER NO. 4

PIER NO. 5

PIER NO. 6

PIER NO. 7

PIER NO. 8

MIN. HORIZONTAL CLEARANCE - 83 FT. (25.3 m)
ON NORTH SIDE OF MNR DEVON BRIDGE

MATCH LINE

SEE SHEET 4

APPROXIMATE LIMITS
OF 100 YEAR FLOOD
BOUNDARY

EXISTING BRIDGE
TO BE REMOVED

PROPOSED BRIDGE

MATCH LINE

PLAN
SCALE: 1:1500

HOUSATONIC RIVER

NAVIGATION CHANNEL

3047.08 FT. (928.75) MEASURED ALONG I-95 &

PIER NO. 7

SEE SHEET 3

SPAN 8

2E

EXISTING PIER
TO BE REMOVED
(TYPICAL)

SPAN 7

1E

SPAN 6

2W

TOP OF
PARAPET

100 YEAR FLOOD
EL. 8.92 FT

EL. 2.72 m

GRANITE FACING
(TYPICAL)

CONCRETE PIER
(TYPICAL)

APPROX. EXIST. &
PROPOSED GRADE

SPAN 5

4W

SPAN 4

6W

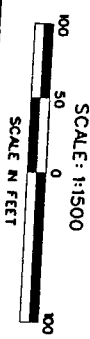
MATCH LINE

SEE SHEET 2

ELEV. FEET (NAVD 88)
EL. 60.000
EL. 40.000
EL. 20.000
EL. 0.000
EL. -20.000
EL. -40.000

NAVIGATION CHANNEL WIDTH VARIES
BETWEEN 100 FT. (30.5 m) AT NORTH
AND 150 FT. (45.7 m) AT SOUTH LIMITS
OF NEW BRIDGE SUPERSTRUCTURE

ELEVATION - SOUTH FASCIA



WATER ELEVATIONS

DATUM	NAVD 88 (m)	NAVD 88 (FT)	NGVD 29 (FT)
MEAN LOW WATER (MLW)	-1.30	-3.60	-2.5
MEAN HIGH WATER (MHW)	0.91	2.99	4.1
HIGH TIDE LINE (HTL)	1.41	4.63	5.7
100 YEAR FLOOD ELEV.	2.72	8.92	10.0

NOTE: THIS PROJECT USES NAVD 88 VERTICAL DATUM AND METRIC UNITS.

- NOTES:
1. NO REPAIR IS PROPOSED AT BRIDGE PIERS IN THE RIVER (VOLUME OF REPAIR - 0 CUBIC YARDS).
 2. THE LOWEST ELEVATION OF THE RIVER BOTTOM IN THE NAVIGATION CHANNEL BETWEEN THE FENDER SYSTEM IS -0.2 METERS (-0.33 FEET), NAVD 88 DATUM. THE LOWEST ELEVATION OF THE RIVER BOTTOM AT PIERS NW AND E IS APPROXIMATELY -6.1 METERS (-20 FEET), NAVD 88 DATUM.
 3. EXISTING PIERS NW AND E SHALL BE REMOVED TO AN ELEVATION THAT IS THE DEEPER OF: 25 FEET BELOW EXISTING PIERS 4W, 3W, 2W AND 2E SHALL BE REMOVED TO AT LEAST 3 FEET BELOW EXISTING GROUND OR RIVER BOTTOM.
 4. EXISTING PIERS 6W AND 5W SHALL BE REMOVED TO A LEAST 1 FOOT BELOW GROUND LNE.
 5. THE DIMENSIONS IN PARENTHESES ARE IN METERS, UNLESS NOTED OTHERWISE.



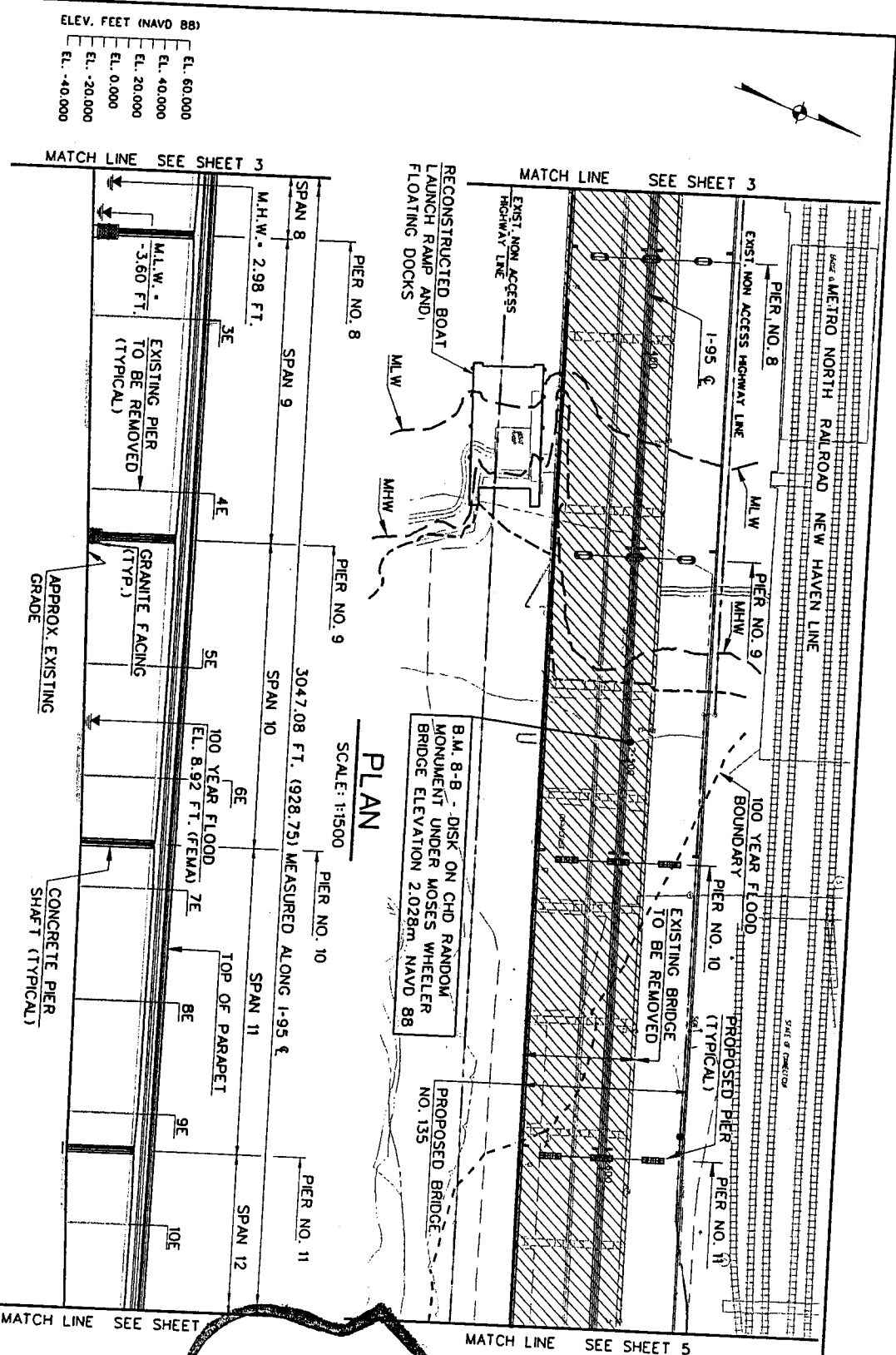
APPROVED
P(3-09-1)
MAY 04 2009
U.S.
COAST GUARD

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
STRATFORD/MILFORD

REPLACEMENT OF I-95 BRIDGE
OVER THE HOUSATONIC RIVER
MILE 3.9

DATE: 8/17/06
GENERAL PLAN BRIDGE NO. 00135

SHEET
3 OF 9



ELEV. FEET (NAVD 88)

EL. 60.000
EL. 40.000
EL. 20.000
EL. 0.000
EL. -20.000
EL. -40.000

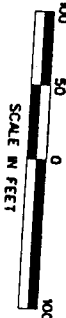
WATER ELEVATIONS

DATUM	NAVD 88 (m)	NAVD 88 (FEET)	NGVD 29 (FEET)
MEAN LOW WATER	-1.00	-3.60	-2.5
MEAN HIGH WATER	0.91	2.99	4.1
HIGH TIDE LINE	1.41	4.63	5.7
100 YEAR FLOOD ELEV.	2.72	8.92	10.0

NOTE: THE PROJECT USES NAVD 88 DATUM AND METRIC UNITS

LEGEND

LIMITS OF EXISTING MOSES WHEELER BRIDGE



ELEVATION - SOUTH FASCIA

SCALE: 1:1500

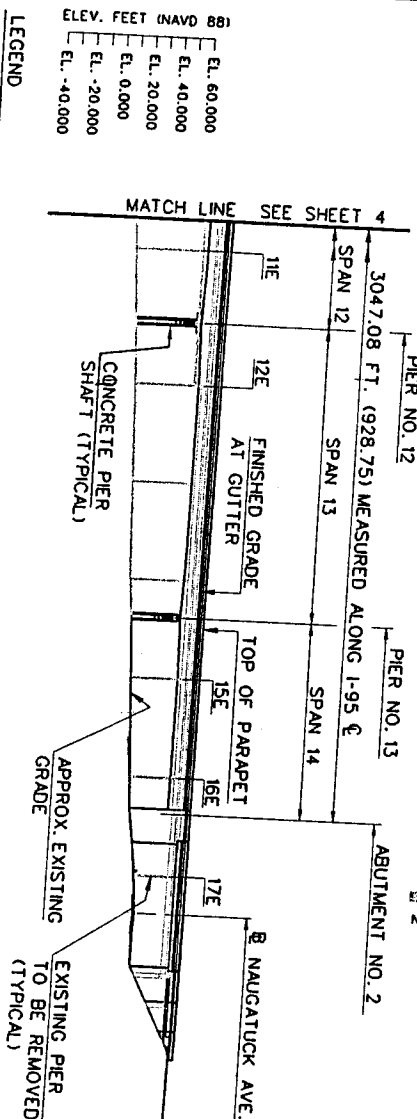
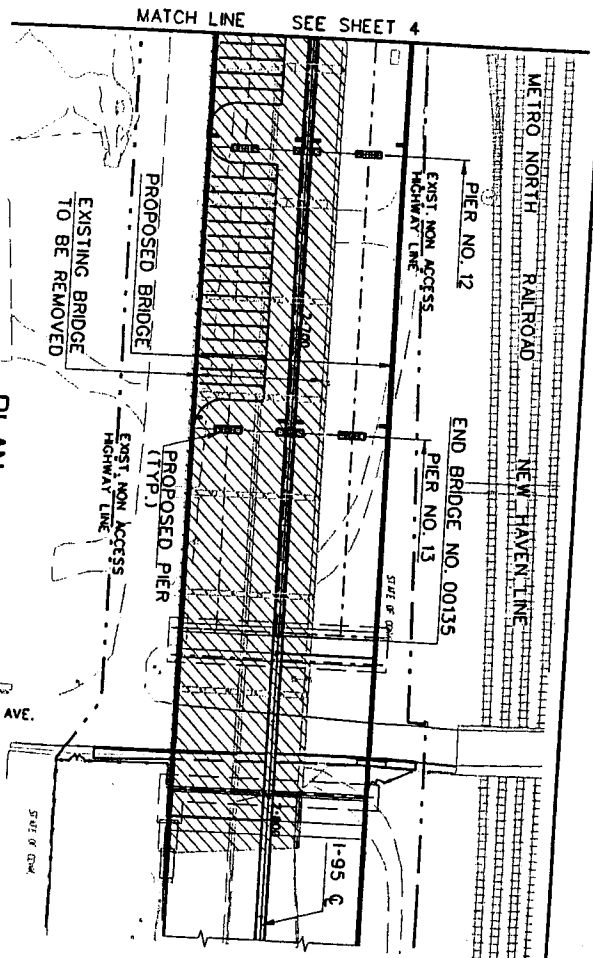
- NOTES:
1. NO RIPRAP IS PROPOSED AT BRIDGE PIERS IN THE RIVER (VOLUME OF RIPRAP - 0 C.Y.).
 2. EXISTING PIERS 3E AND 4E SHALL BE REMOVED TO AT LEAST 3 FEET BELOW EXISTING GROUND OR RIVER BOTTOM.
 3. EXISTING PIERS 5E, 6E, 7E, 8E, 9E AND 10E SHALL BE REMOVED TO AT LEAST 1 FOOT BELOW GROUND LINE.
 4. DIMENSIONS IN PARENTHESIS ARE IN METERS UNLESS NOTED OTHERWISE.

APPROVED
P(3-09-1)
MAY 04 2009
U.S.
COAST GUARD

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
STRATFORD/MILFORD
REPLACEMENT OF 1-95 BRIDGE
OVER THE HOUSATONIC RIVER
MILE 3.9

DATE: 8/17/06 GENERAL PLAN BRIDGE NO. 00135

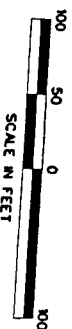
SHEET 4 OF 9



LEGEND

LIMITS OF EXISTING MOSES WHEELER BRIDGE

- NOTES:
1. THIS PROJECT USES NAVD 88 DATUM AND METRIC UNITS.
 2. THIS PORTION OF THE PROJECT IS OUTSIDE (LANDWARD) OF THE 100 YEAR FLOOD BOUNDARY.
 3. EXISTING PIERS 11E, 12E, 13E, 14E, 15E, 16E AND 17E SHALL BE REMOVED TO AT LEAST 1 FOOT BELOW GROUND LINE.
 4. DIMENSIONS IN PARENTHESES ARE IN METERS, UNLESS NOTED OTHERWISE.



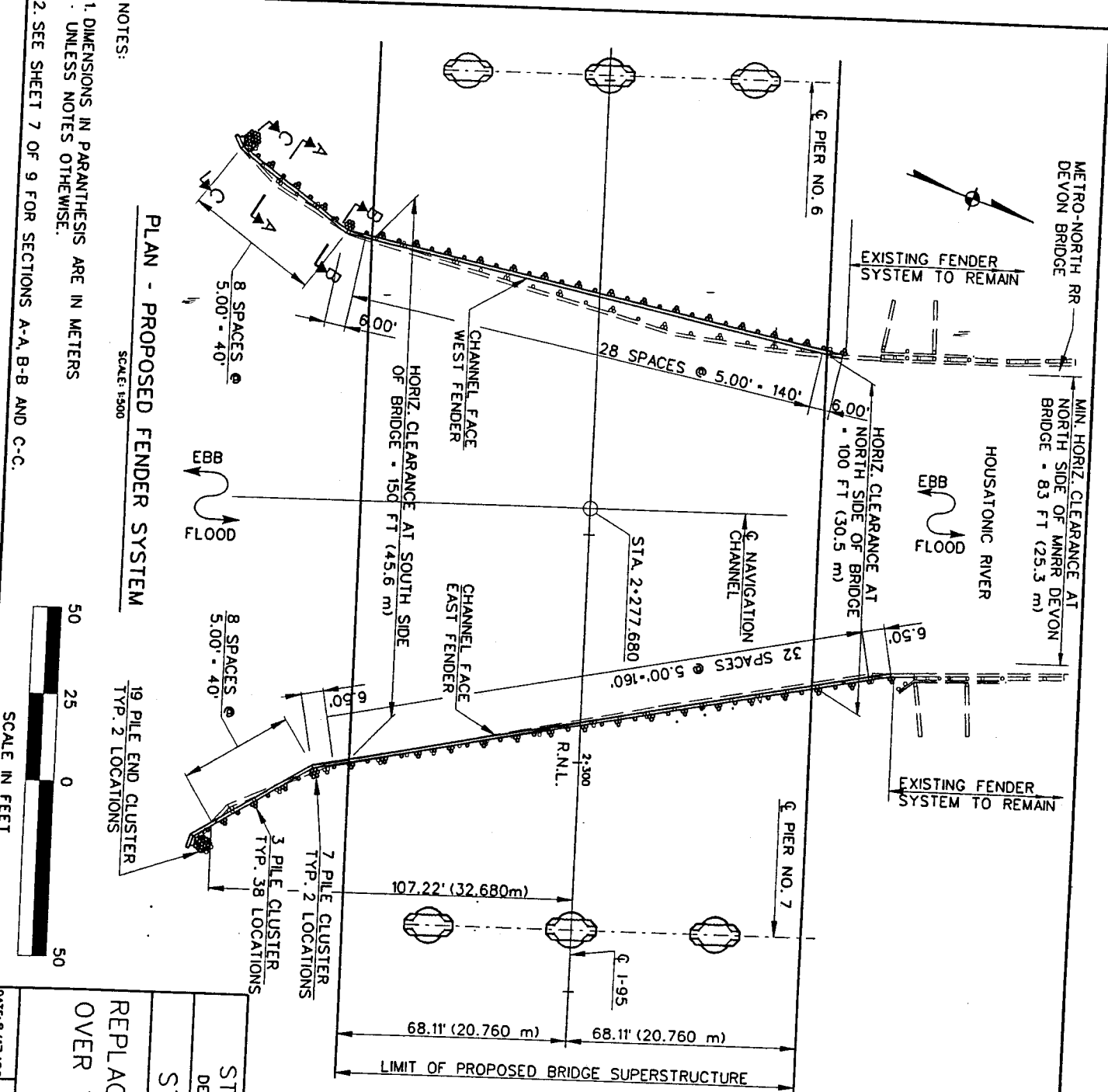
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

STRATFORD/MILFORD

REPLACEMENT OF I-95 BRIDGE
OVER THE HOUSATONIC RIVER

mile 3.9

DATE: 8/17/06 GENERAL PLAN BRIDGE NO. 00135 SHEET 5 OF 9

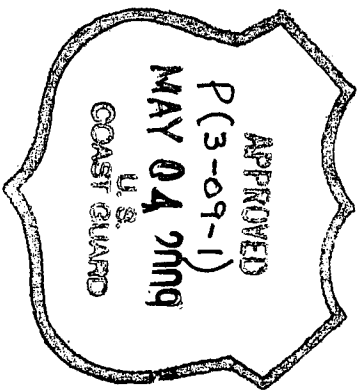
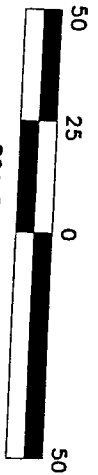


PLAN - PROPOSED FENDER SYSTEM

SCALE: 1:500

- NOTES:
1. DIMENSIONS IN PARANTHESIS ARE IN METERS
UNLESS NOTES OTHERWISE.
 2. SEE SHEET 7 OF 9 FOR SECTIONS A-A, B-B AND C-C.

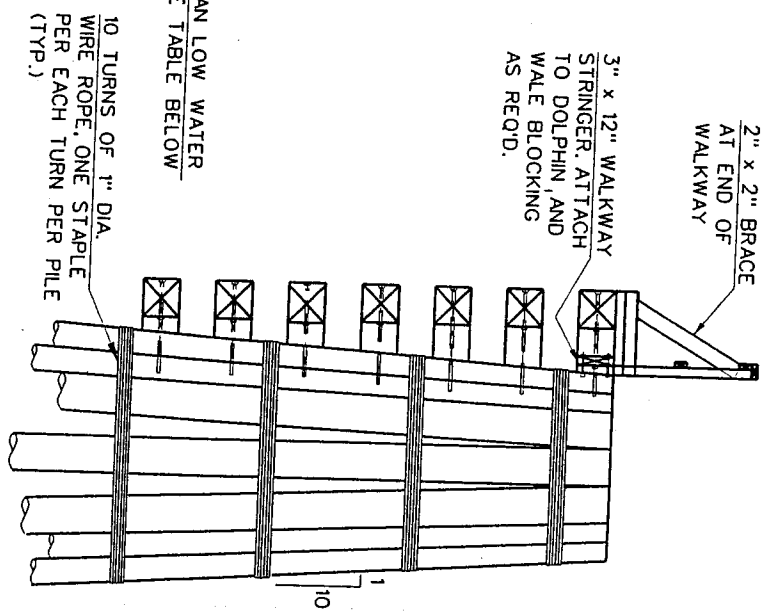
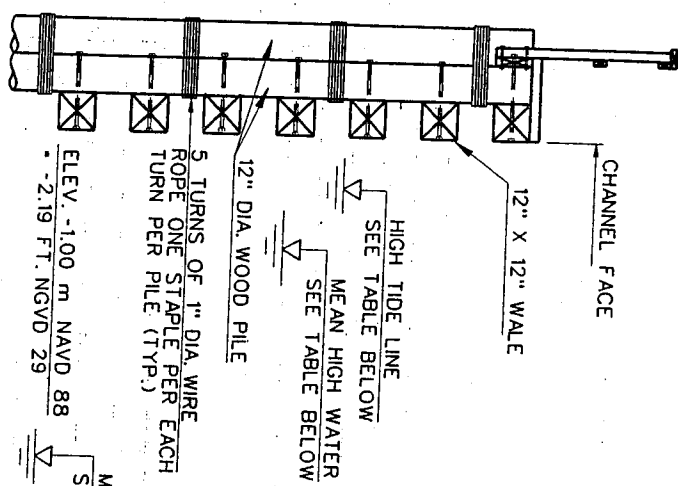
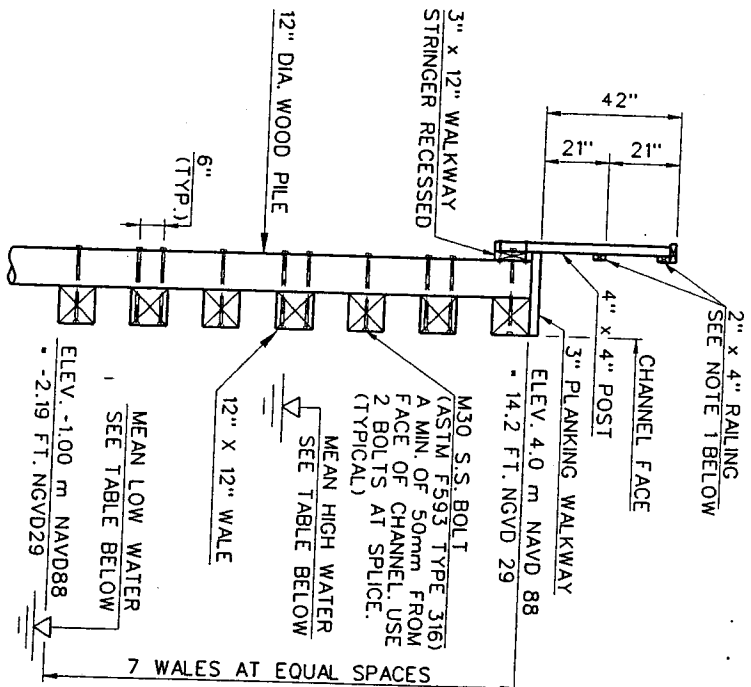
SCALE IN FEET



ALL TIMBER PILES SHALL BE 55 FEET (17m) LONG IN-PLACE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
STRATFORD/MILFORD

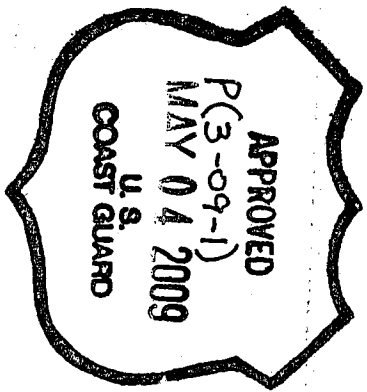
REPLACEMENT OF 1-95 BRIDGE
OVER THE HOUSATONIC RIVER
MILE 3.9



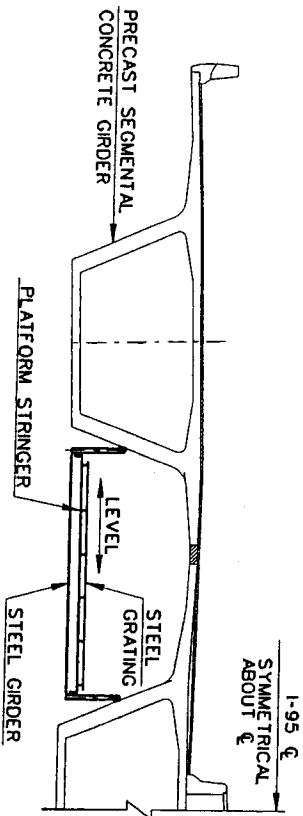
WATER ELEVATIONS

	DATUM	
MEAN LOW WATER	NAVD 88	-1.10 m
MEAN HIGH WATER	NGVD 29	-2.5 FT.
HIGH TIDE LINE		0.91 m
		4.1 FT.
		1.41 m
		5.7 FT.

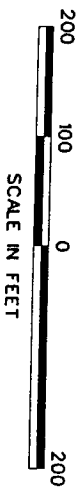
- NOTES:
1. RAILING SHALL EXTEND FULL LENGTH OF FENDER SYSTEM.
 2. PROVIDE RAILING POST AT EACH PILE OR AT A MAXIMUM SPACING OF 5 FEET.
 3. BOLTS ON THE FACE OF THE FENDER SYSTEM SHALL BE COUNTERSUNK.



DATE: 10/3/06	PROPOSED FENDER SYSTEM - DETAILS	SHEET 7 OF 9
STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION		
STRATFORD/MILFORD		
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER MILE 3.9		



NOT TO SCALE



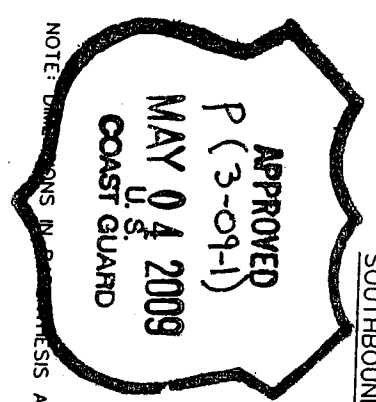
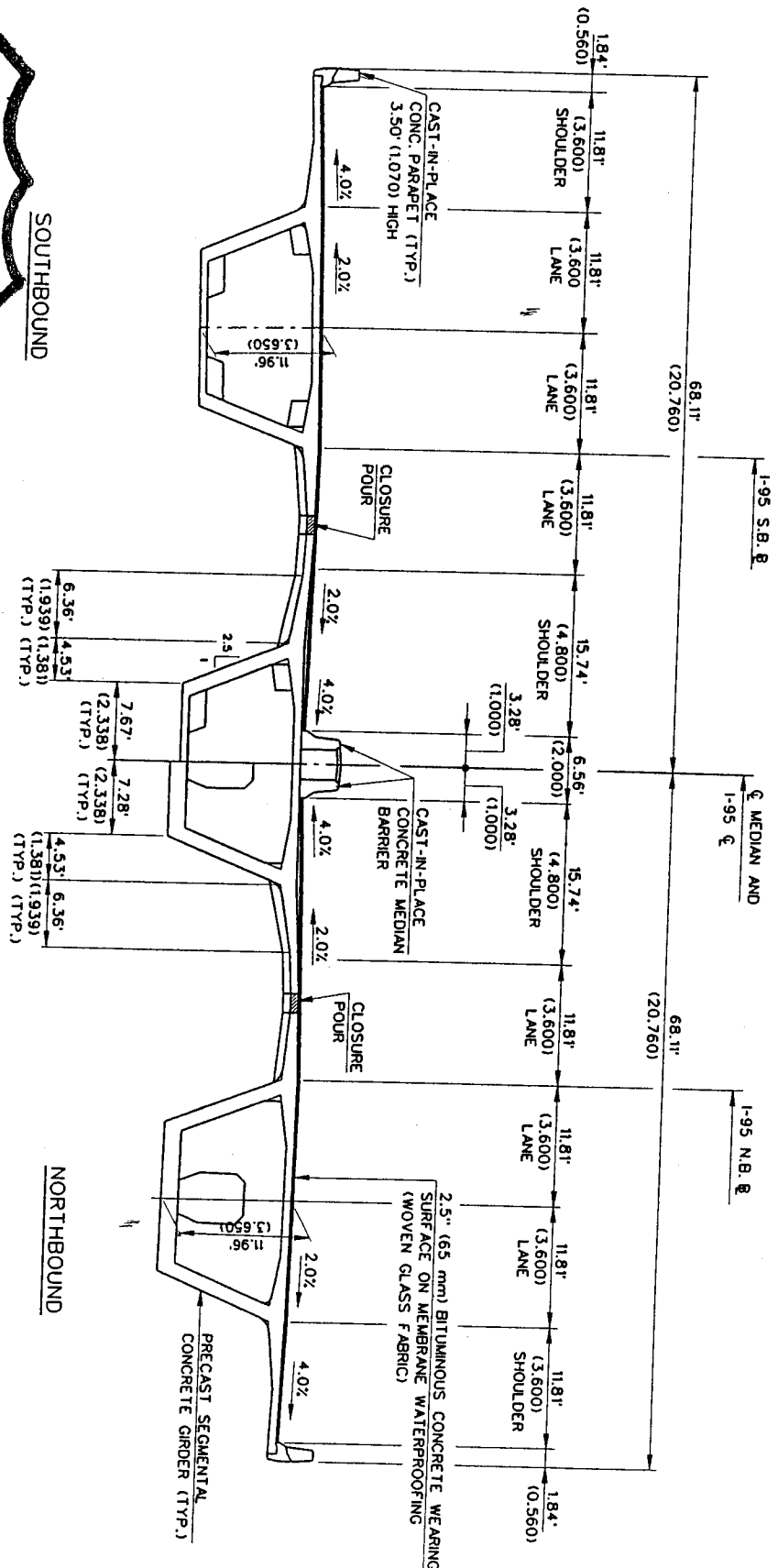
SCALE: 1:750

1. DIMENSIONS IN PARENTHESIS ARE IN METERS UNLESS NOTED OTHERWISE.

2. THE LOW CHORD (BOTTOM) OF THE UNDER BRIDGE INSPECTION PLATFORMS DO NOT PROJECT BELOW THE BOTTOM OF THE PRECAST SEGMENTAL CONCRETE GIRDERS.

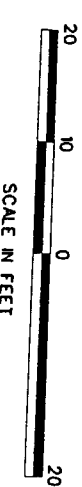
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STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	
STRATFORD/MILFORD	
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER	
MILE 3.9	
DATE: 8/17/06	SHEET 8 of 9
FIXED INSPECTION PLATFORM	



NORMAL CROSS SECTION

HALF-SECTION AT MID-SPAN
AND ABUTMENTS (ABUTMENT
DIAPHRAGM NOT SHOWN)



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
STRATFORD/MILFORD
REPLACEMENT OF 1-95 BRIDGE
OVER THE HOUSATONIC RIVER
MILE 3.9

DATE: 8/17/06 TYPICAL SECTION BRIDGE 00135 SHEET 9 of 9